NPIC/TSSG/DED-1524-69
4 March 1969

MEMORANDUM FOR: Chief, Technical Services & Support Group, NPIC

SUBJECT : Capability of NPIC/[redacted] Cloud Screening Device to Detect Haze and Out-of-Focus Conditions

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REFERENCE : [redacted] Dated 18 February 1969

1. A precise answer to the questions posed in Paragraph 4 of the referenced memorandum cannot be given at this time since the device has not been built and since feasibility demonstrations have not yet indicated the approach that will be employed in the screener.

2. During April, feasibility tests will be conducted to determine which of the following listed techniques will be used in the engineering prototype:

a. Electronic clue extraction (ECE)

b. Diffraction pattern analysis (DPA)

c. Holographic matched filtering (HMF)

3. Based on the best available data the following comments indicate what can be expected from the engineering prototype:

OUT-OF-FOCUS CONDITION - ECE--would not indicate this condition, assuming that all other factors relating to quality were good. DPA and HMF would very likely work although tests would have to be made on various out-of-focus targets to indicate the range of applicability.

HAZE CONDITIONS - ECE-would detect haze down to some pre-determined and pre-learned threshold. Here we must define for the machine what we mean by haze. DPA and HMF would work to a predetermined threshold

4. In essence, the degree of success in determining out-of-focus and/or haze conditions will depend on the cloud screening approach decided upon based on the results of the Phase III feasibility tests scheduled for April.

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